

DO ONLINE RESPONDENTS GO THE EXTRA MILE AND TAKE ON INCONVENIENT TASKS?

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In the world of online panel research where possibly a small respondent universe is surveyed again and again [1], it is crucial to be sensitive to respondent burden. Many online panel research companies routinely over-burden respondents with lengthy surveys, survey questions, screeners, and possibly too many surveys in a week. [2] Under these circumstances, how much can we realistically expect respondents to do? More generally, how much will any respondent do when the question instructs them to go do something beyond just conveniently answering the question on the screen? Will a seemingly inconvenient request get you the behavior you expect? The following experiment sheds some light on whether respondents may or may not be willing to go the extra mile and do a requested task.

Methodological research is part of the Knowledge Networks approach to data quality. In February 2008 we conducted an experiment to measure the compliance of panel members with a request to go and check their records before answering a question about their home electricity bill. We then examined how the survey answers differed according to whether respondents were instructed to do the records check or not and whether they complied or not.

The purpose of the study was to measure compliance with instructions to report charges appearing on the most recent electricity bill. We selected an electricity bill because it is common to almost every household. KnowledgePanel® members were first randomly assigned to either an experimental or a control group. We asked the experimental group to go and retrieve their most recent electricity bill and report the amount on the screen in dollars and cents. We asked the control group to just report how much money they spent on their most recent bill, without asking them to go and refer to the actual bill. In order to make the request more acceptable to the experimental group, we offered them the option, "I cannot find the bill." This way, people who did not want to or couldn't look up their most recent electricity bill had an acceptable reason to not retrieve it. This option also helped to limit the number of break-offs in response to a request that may be considered too burdensome.

We restricted the analysis to 4,114 respondents whose electricity charges appear in a separate electricity bill (not combined with other utilities or services, such as natural gas) and who paid the bill themselves (and thus were the most knowledgeable about it). We divided the experimental group into two subgroups: the experimental compliant group (1,390 respondents) who did retrieve and look up their bill, and the experimental non-compliant group (623 respondents) who declined to retrieve and look up their bill for any reason (could not find it or did not want to find it). The control group (2,101 respondents) was asked to report their electricity bill amount without looking it up.

The first research question was what proportion of respondents was compliant with our request to retrieve and consult their bill? Sixty-nine percent of those asked reported to have their bill in front of them while entering the amount charged for their electricity. One might wonder if some of the respondents who reported having the actual bill in front of them were, in fact, being truthful about it. We addressed this question indirectly by analyzing the frequency of respondents who “rounded off” their reported amount to whole dollars. The assumption here is that we would expect only 1% of the responses, in theory, be in the amount of a whole dollar if they actually consulted their bill. What we saw was that precise non-rounded amounts were provided by 77% of the experimental compliant group (where 99% would be assumed) and 27% of the experimental non-compliant group, which in theory should match the control group. However, fully 41% of the control group—surprisingly higher than the non-compliant experimental group—reported precise, non-rounded amounts. This observation of reporting precise, non-rounded amounts indirectly suggests that a good proportion of respondents may have actually consulted their electricity bill, regardless of any instructions to do so.

In terms of the actual amounts reported, the median for the experimental compliant group was \$99.26 versus \$108.00 for the experimental non-compliant group and \$105.00 for the control group. Differences in medians between the experimental compliant group and the other two groups are statistically significant ($p < .05$) [3]. Additionally, when we focus on the median amounts to examine whether a precise amount or a rounded amount was given, two distinct patterns emerge. First, median amounts are similar across all three groups. Second, the median amount reported by those rounding is consistently about \$20 more than the median among those providing a precise amount, indicating that these less-precise, rounded figures can be interpreted as over-reports. The overall medians for each group appear to be a direct function of the amount of data that is rounded, i.e. over-reported.

Table 1. Median Amounts in Dollars Reported for Most Recent Electricity Bill

	Total	Those Not Rounding Off	Those Rounding Off
Experimental Compliant Group	99.26	94.49	115.00
Experimental Non-Compliant Group	108.00	93.28	117.00
Control Group	105.00	94.71	115.00

We actually expected these differences to be greater. In a second approach to see if there are detectable differences, we investigated the amount of time each group took in answering these questions. When analyzing time latency data the median time--not the mean time—is used, because the mean can be highly skewed by extreme values. [4][5] Figure 1 shows the median duration time in seconds by group.

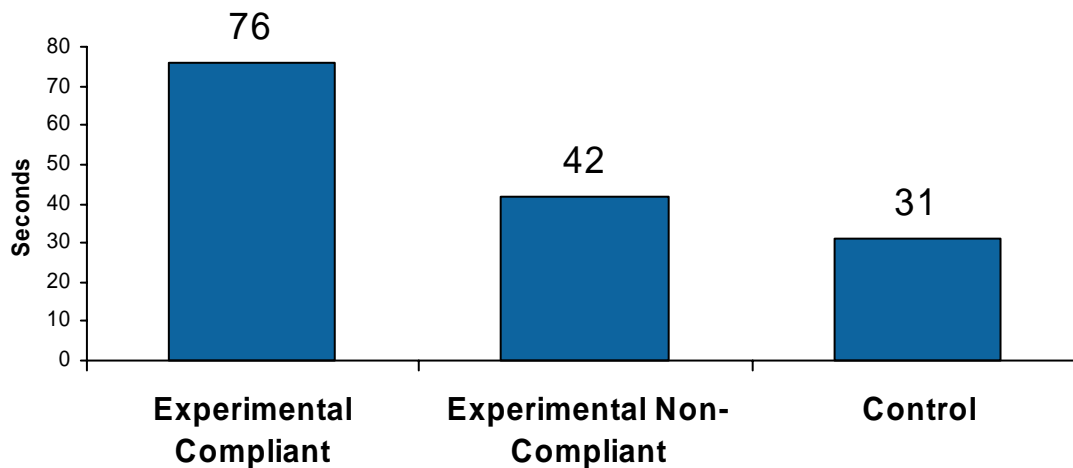


Figure 1. Median time to report amount of electricity bill by group (in seconds).

The compliant group took a median time of 76 seconds to answer the question, while the non-compliant group took a median of only 42 seconds. The control group took the least amount of time to answer, 31 seconds. All of these median times are statistically different from one another ($p < .001$) [3].

These findings suggest that panel members respond pretty well to a more demanding request that increases response burden in a survey. The median time latency of 31 seconds among the control group respondents can serve as a baseline. Successful compliance with the explicit request to look up the bill basically adds 45 seconds to this task. However, the effect on data quality is evident; respondents who were asked simply to report an amount with no “look up” instruction tended to overestimate their electricity bill by about 6%, if we conclude that the more accurate value comes from the experimental compliant group.

This small experiment provides some evidence to possibly conclude that it may be feasible to ask panel members to do something extra—in this case, look up a record, which can improve data quality and reduce bias. A sizeable proportion will go the extra mile to provide a more accurate group estimate.

It is also true that because we asked for a specific dollar and cents amount, i.e. down to two decimal places, we implicitly suggested a higher precision was required. We would still expect significant differences—and greater accuracy—from the experimental groups compared to the control group if we were to repeat the experiment, and if everyone were asked to round to the nearest dollar. This might be the topic of a follow-up study.

This experiment and many others illustrate Knowledge Networks’ ongoing commitment to quality. We continue to test our own measurement methods, procedures and assumptions as frequently as possible through scientific evaluation. Since our founding in 1998, this endeavor has been a basic tenet in our corporate philosophy; it extends from online survey design, to statistical sampling and other areas. We welcome

feedback with regard to this experiment, or about other areas that you feel warrant further exploration.

Footnotes:

1. Fulgoni, Gian. 2006. CASRO 31st Annual Conference, October 2006: 10% of respondents account for 80% of survey responses (and 1% account for 34%).
2. The Decision Maker's Guide to Online Research™ 2007, p. 20.
3. Mann Whitney U test for medians.
4. Fazio, R.H. C. Hendrick and M.S. Clark, Editors. 1990. "A practical guide to the use of response latency in social psychological research" Review of Personality and Social Psychology Sage: Newbury Park, CA. 74–97.
5. Callegaro, M., Yang, Y., Bholra, D., & Dillman, D. A. 2006. "Response latency as an indicator of optimizing: A study comparing job applicants' and job incumbents' response time on a web survey." In C. van Dijkum, J. Blasius & C. Durand (Eds.), Recent developments and applications in social research methodology. Proceedings of the RC 33 Sixth International Conference on Social Science Methodology. Amsterdam 2004 Openden & Farmington Hill: Barbara Budrich.